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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,337

02/21/2007

Arjen Amelink

207,517

5414

38137 7590 04/27/2010  
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EXAMINER

BHAT, ADITYA S

ART UNIT

PAPER NUMBER

2863

MAIL DATE

DELIVERY MODE

04/27/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/573,337	AMELINK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	ADITYA BHAT	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 17-27 and 29-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-27 and 29-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status***

1. Claims 17-27 and 29-41 are currently pending in this application.

### ***Election/Restrictions***

2. During a telephone conversation with Robert Smith on April 23, 2010 it was discussed that the restriction requirement would be withdrawn.

### ***Claim Objections***

3. Claims 23-24, 29-30, 35, and 37 objected to because of the following reason:  
Claims 17-25 and 32 can not be amended as they have been withdrawn from consideration and should be cancelled in order to place the application in better condition for allowance. Appropriate correction is required.

### ***Priority***

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

5. The drawings submitted on 3/23/2006 are in compliance with 37 CFR § 1.81 and 37 CFR § 1.83 and have been accepted by the examiner.

### ***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 17-23, 26-27, 29, 32-33, 37-40 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Specifically, it is

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unclear what the term medium is referring to. A review of the specification did not produce a clear definition of the term "medium".

Claim 24-25, 30-31 and 41 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Specifically, the phrase "Computer program product to be loaded" is directed towards non-statutory subject matter as the computer program isn't actually loaded on to a computer readable medium.

Also with regards to claim 25, the term data carrier should be clearly defined in the specification. No such definition has been found.

With regards to claim 41, Bigio et al. (USPN 6,381,018) teaches the physical feature is calculated by curve fitting the measured differential backscatter signal to a backscatter function, in which the backscatter function is a function of an average path-length (z) traveled by detected scattered photons, the average path-length (z) being independent from an absorption coefficient of the medium, and from a scattering coefficient of the medium

### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 24 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Bigio et al (USPN 6,381,018).

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With regards to claim 24, Bigio et al. (USPN 6,381,018) teaches a computer program product to be loaded by a computer, the computer program product, after being loaded, providing the computer with the capacity to:

receive a first signal indicative of a collected radiation received from a first fiber and a second signal (J) indicative of a collected radiation received from a second fiber; (16;figure 2a) It is not clear from the claim that the signal is sent and received at the same fiber.

determine a measured differential backscatter signal (Rbs) as a function of wavelength of the collected radiation using the first and second signals;(Col. 4, lines 55-58) and

calculate a physical feature (Col. 5, lines 19-35)

With regards to claim 30, Bigio et al. (USPN 6,381,018) teaches a computer program product to be loaded by a computer, the computer program product, after being loaded, providing the computer with the capacity to:

receive a first signal (1) indicative for a collected radiation received from a first fiber (5) and a second signal (J) indicative for a collected radiation received from a second fiber (16;figure 2a)

determine a measured differential backscatter signal (Rbs) as a function of wavelength (k) of the collected radiation using the first and second signals (I, J); (Col. 4, lines 55-58) and

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calculate a physical feature by curve fitting the measured differential backscatter signal to a backscatter function, wherein the backscatter function is a function of a mean free path of photons. (col. 5, lines 19-35)

With regards to claim 31, Bigio et al. (USPN 6,381,018) teaches a computer which has been loaded with a computer program product according to claim 30. (20; figure 2a) must have instructions/software to interpret signals.

With regards to claim 41, Bigio et al. (USPN 6,381,018) teaches the physical feature is calculated by curve fitting the measured differential backscatter signal to a backscatter function, in which the backscatter function is a function of an average path-length (z) traveled by detected scattered photons, the average path-length (z) being independent from an absorption coefficient of the medium, and from a scattering coefficient of the medium (figures 4a & 4b)

### ***Response to Arguments***

**10.** Applicant's arguments filed 12/9/09 have been fully considered but they are not persuasive.

Applicant is reminded that during patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

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While the meaning of claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allowed. This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

In this instance applicant argues that the prior art of record does not teach at least one fiber that both delivers light from the light source and measures scattered light from the sample.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., at least one fiber that both delivers light from the light source and measures scattered light from the sample.) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

### ***Conclusion***

**11.** Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

**12.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADITYA S. BHAT whose telephone number is (571)272-2270. The examiner can normally be reached on M-F 9-5:30.

**13.** If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

**14.** Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic



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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aditya Bhat/  
Examiner, Art Unit 2863  
April 16, 2010